In the Specification

Please amend the paragraph beginning on line 8 of page 8 as follows:

In a preferred embodiment of the invention, the liquids production unit 32 comprises a number of catalysts which are constructed using PI micro-reactor technology. As described in U.S. Patent No. 6,211,255, which is hereby incorporated herein by reference, such a catalyst may comprise ~~an inactive substrate having plurality of channels formed therein which are coated with a Fisher-Tropsch catalyst and through which the syngas is permitted to flow.~~ a monolithic catalyst having a solid body through which a plurality of discrete and continuous channels extend. In addition, the walls of the channels consist of or contain a catalyst material. In use, the synthesis gas is introduced into one end of the channels, the gas is synthesized as it passes through the channels, and the liquid product is removed from the opposite end of the channels.

The monolithic catalyst may comprise a substrate which is formed, e.g., by extrusion. In one embodiment, the monolithic catalyst comprises an inactive substrate with a relatively low specific surface area, a relatively high specific surface area catalyst support which is deposited on the walls of the channels using known techniques, and a catalyst material which is deposited on the walls of the channels, preferably simultaneously with the catalyst support material, again using known techniques. In another embodiment, the monolithic catalyst comprises an inactive substrate having a relatively high specific surface area, and a catalyst material which is deposited on the walls of the channels using known techniques. In yet another embodiment, the monolithic catalyst may

comprise an extrusion of a relatively high specific surface area material which incorporates the catalyst material. Alternatively, the monolith may be formed directly from the catalyst material.

The relatively low surface area substrate materials may comprise, for example, a ceramic or a metal. The relatively high surface area substrate materials may comprise, for example, gamma-Al_2O_3, SiO_2, TiO_2 or a zeolite. The catalyst material may comprise, for example, Co, Fe, Cr, Al, Yt, Ru or Ni. The catalyst material may also include a promoter, such as Re, Pt, Ir, Rh, Pd or Ru.

The monolithic catalysts preferably has an open area or void fraction of between about 50% and 90%, and more preferably between about 60% and 80%, for example about 70%. In addition, the cell density of the monolithic catalyst is preferably in the range of about 100 cells/in^2 to 1000 cells/in^2, more preferably about 200 cells/in^2 to 600 cells/in^2, and most preferably about 300 cells/in^2 to 500 cells/in^2. Furthermore, the wall thickness of the monolithic catalyst is preferably between about 0.05 mm and 0.40 mm, and more preferably between about 0.10 mm and 0.30 mm, for example 0.15 mm. Also, the monolithic catalyst may have a length in the centimeters to meters range, depending on the application.

When the liquids production unit 32 is operated in the Taylor flow regime, the narrow channels of the monolithic catalyst will promote almost perfect plug flow and significantly reduce or eliminate back mixing. Thus, since chemical reactions characterized by a positive order dependence on reactant concentrations are most efficiently carried out in plug-flow, the volume of

monolithic catalyst required, and thus the size of the liquids production unit 32, will be smaller than in catalytic reactors which operate in mixed flow.